

Amendments to the Specification:

Please replace each designated paragraph with the respective amended paragraph:

Please amend the fifth paragraph on page 5 of the specification, as follows:

Radiant energy emitted from emitter 32 is equally incident upon reflector 38a, 38b after passing through the respective sensing chamber 30a or reference chamber 30b. On reflection off of the respective surfaces 38a, b, the radiant energy R_S and R_R passes through respective filter 36a, b and is incident upon respective sensor 34a, b which converts same to a corresponding electrical signal. Those signals are in turn coupled to control circuit 16.

Please amend the sixth full paragraph on page 5 of the application, as follows:

Representative types of gases suitable for being sensed using gas sensor 18 include hydrocarbons, such as carbon monoxide, carbon dioxide, combustible gases, as methane, ethane and the like as well as water vapor. It will be understood that the gas being sensed is not a limitation of the invention.

Please amend the last paragraph on page 5 of the application, extending to top 2 lines of page 6, as follows:

Emitter 32 is selected to have a radiant energy output of a wavelength absorbable by the type of gas to be sensed. For example, emitters having wave lengths in the range of ~~3~~ three to ~~5~~ five microns are suitable for sensing hydrocarbons, such as carbon monoxide or carbon dioxide. Other wave lengths would be used, as would be understood by those of skill in the art, for sensing different gases.

Please amend the fifth full paragraph on page 6 of the application, as follows:

As illustrated in Fig. 2, a detector 50 defines a plurality of gas inlets 52 in the housing 12-1 having wall(s) 18-1. A gas permeable filter 40-1 permits an inflow of gas from the inlets 52 to pass through a perforated metal condenser 42-1, having openings ~~52~~ 54 into a gas sensing chamber 58 via openings 56.

Please amend the second full paragraph on page 7 of the application, as follows:

The detector 50-2 of Fig. 4 incorporates first and second gas permeable filters 40-1, 40-3 which are carried respectively on detector housing 12-1 and first metal condenser 42-2. A second metal condenser 42-3 as carried in detector 50-2 is displaced from the condenser 42-2. Inflowing gas, in detector 50-2, must pass through an alternating stack of permeable filter 40-1, condenser 42-2, (through openings 54-1), permeable filter 40-3 and second condenser 42-3 prior to entering the gas sensing chamber 58-2.

Please amend the third full paragraph on page 7 of the application, as follows:

Fig. 5 illustrates detector 50-3 which incorporates first and second gas permeable filters 40-1, 40-3 which are located on opposite sides of condenser 42-2. A second condenser 42-4 is located within housing 18-2 of gas ~~sensor~~ sensing chamber 58-3 having an opening 56-2. It will be understood that the degree of filtering can be altered or selected such that the exterior filter, such as 40-1, performs a coarser filtering function than the interior filter, such as 40-3, which can be selected to pass only smaller molecules of interest.

Please amend the last paragraph starting on page 7 and extending through the top 3 lines on page 8, as follows:

By locating the interior or finer filter 40-3 closer to the sensing chamber, such as 58-1, -2 or -3, the slower diffusion rate in the inflowing gas, produced by the finer filter 40-3, for example, will result in minimal delays since the subject filter, 40-3 is closer to the sensing chamber, such as 58-3, than is the case with the exterior, coarser filter, such as 40-1. Hence, the gas having the lowest diffusion rate has the shortest distance to diffuse into and throughout the sensing chamber 58-3.

Please amend the first full paragraph on page 8, as follows:

The condenser or condensers, such as 42-2, 42-3, 42-4, can be implemented as singular elements or as composites of multiple elements. Preferred materials include soft metals, such as brass, which is environmentally safe and easily machined or stamped. Other metals having high heat conductivity characteristics can also be used.

Please amend the second full paragraph on page 8, as follows:

It will be understood that the condenser or condensers can be coated not only to prevent corrosion but could also be coated so as to be hydrophilic or hydrophobic without departing from the spirit and scope of the invention. Those of skill will understand that a variety of forms of condensers come within the spirit and scope of the invention provided they remove water vapor from gas entering the detector. Various high thermal conductivity materials could also be used in such condensers, such as metals or high thermal conductivity non-metals.

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Amendment A
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Please amend the fourth full paragraph on page 8, as follows:

Graph 102 illustrates the improvement over time and detector output where one condenser is present in the respective detector. Finally, graph 104 illustrates further improvement in the presence of two ~~detectors~~ condensers sequentially located in the fluid flow path such that the inflowing fluid must pass through both condensers one after the other prior to diffusing throughout the sensing chamber.